



UNITED STATES
NUCLEAR REGULATORY COMMISSION

REGION II
SAM NUNN ATLANTA FEDERAL CENTER
61 FORSYTH STREET, SW, SUITE 23T85
ATLANTA, GEORGIA 30303-8931

April 30, 2007

Southern Nuclear Operating Company, Inc.
ATTN: Mr. D. R. Madison
Vice President - Hatch
11208 Hatch Parkway North
Baxley, GA 31513

SUBJECT: EDWIN I. HATCH NUCLEAR PLANT - NRC INTEGRATED INSPECTION
REPORT 05000321/2007002 AND 05000366/2007002 AND ANNUAL
ASSESSMENT MEETING SUMMARY

Dear Mr. Madison:

On March 31, 2007, the U.S. Nuclear Regulatory Commission (NRC) completed an inspection at your Edwin I. Hatch Nuclear Plant, Units 1 and 2. The enclosed integrated inspection report documents the inspection findings, which were discussed on April 13, 2007, with you and other members of your staff.

The inspection examined activities conducted under your license as they relate to safety and compliance with the Commission's rules and regulations and with the conditions of your license. The inspectors reviewed selected procedures and records, observed activities, and interviewed personnel.

The enclosed inspection report documents two findings of very low safety significance which were determined to be violations of NRC requirements. However, because of the very low safety significance and because they were entered into your corrective action program, the NRC is treating these violations as non-cited violations (NCVs) consistent with Section VI.A of the NRC Enforcement Policy. If you contest these NCVs, you should provide a response within 30 days of the date of this inspection report, with the basis for your denial, to the United States Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington DC 20555-0001; with copies to the Regional Administrator, Region II; the Director, Office of Enforcement, United States Nuclear Regulatory Commission, Washington, DC 20555-0001; and the NRC Resident Inspector at Hatch.

In accordance with the Code of Federal Regulations 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter, its enclosures, and your response (if any) will be available electronically for public inspection in the NRC Public Document Room or from the Publicly

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Sincerely,

/RA/

Scott M. Shaeffer, Chief
Reactor Projects Branch 2
Division of Reactor Projects

Docket Nos.: 50-321 and 50-366
License Nos.: DPR-57 and NPF-5

Enclosure: Inspection Report 05000321/2007002 and 05000366/2007002
w/Attachment: Supplemental Information

cc w/encl: (See page 3)

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NAME	C. Rapp	S. Shaeffer	D. Simpkins	J. Hickey	K. Korth	J. Fuller	A. Nielsen	L. Lake	G. Kuzo	J. Díaz
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Letter to D. R. Madison from Scott M. Shaeffer dated April 30, 2007

SUBJECT: EDWIN I. HATCH NUCLEAR PLANT - NRC INTEGRATED INSPECTION
REPORT 05000321/2007002 AND 05000366/2007002

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U. S. NUCLEAR REGULATORY COMMISSION

REGION II

Docket Nos.: 50-321, 50-366

License Nos.: DPR-57, NPF-5

Report Nos.: 05000321/2007002 and 05000366/2007002

Licensee: Southern Nuclear Operating Company, Inc.

Facility: Edwin I. Hatch Nuclear Plant

Location: Baxley, GA

Dates: January 1- March 31, 2007

Inspectors: D. Simpkins, Senior (Sr.) Resident Inspector
J. Hickey, Resident Inspector
K. Korth, Reactor Inspector (Sections 1R04, 1R15, and 1R22)
J. Fuller, Reactor Inspector (Section 1R08)
A. Nielsen, Health Physicist (Sections 2OS1, 2PS1, 2PS2 and 4OA5)
G. Kuzo, Sr. Health Physicist (Sections 2OS1 and 2OS2)
J. Díaz Vélez, Health Physicist (Section 4OA1)
L. Lake, Sr. Reactor Inspector (Section 4OA2)

Approved by: Scott M. Shaeffer, Chief
Reactor Projects Branch 2
Division of Reactor Projects

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SUMMARY OF FINDINGS

IR 05000321/2007002 and 05000366/2007002; 01/01/2007-03/31/2007; Edwin I. Hatch Nuclear Plant, Units 1 & 2, Operability Evaluations, Surveillance Testing.

The report covered a three-month period of inspection by the resident inspectors, three health physics inspectors, and three reactor inspectors. Two non-cited violations were identified during this inspection period. The significance of most findings is indicated by their color (Green, White, Yellow, or Red) using Inspection Manual Chapter 0609, "Significance Determination Process" (SDP). Findings for which the SDP does not apply may be Green or be assigned a severity level after management review. The NRC's program for overseeing the safe operation of commercial nuclear power reactors is described in NUREG-1649, "Reactor Oversight Process," Revision 4, dated December, 2006.

A. NRC-Identified and Self-Revealing Findings

Cornerstone: Mitigating Systems

- Severity Level IV. An NRC-identified Severity Level IV non-cited violation (NCV) was identified for an inadequate 10 CFR 50.59 evaluation. The licensee proceduralized manual actions in place of automatic actions to close the door to an adjacent office to maintain the main control room (MCR) pressure boundary operable without prior NRC review and approval.

Violations of 10 CFR 50.59 potentially impact the NRC's ability to perform its regulatory function. Therefore, this finding was subject to traditional enforcement. This finding was determined to be of very low safety significance because the door only impacted the radiological response of the MCR, the door was capable of being closed, and procedural guidance was in place to close the door. In accordance with the NRC Enforcement Policy, Supplement I.D.5, this finding was determined to be a Severity Level IV violation. This violation has been entered into the licensee's corrective action program as Condition Report (CR) 2006112331. (Section 1R15)

- Green. An NRC-identified NCV of 10 CFR Part 50, APP B, Criterion XI, Test Control, was identified for pre-conditioning of the Residual Heat Removal (RHR)/Core Spray (CS) pump room cooler water supply valves. The surveillance test procedure sequence caused these valves to be opened and closed prior to performing the documented stroke time testing.

The inspectors determined this finding is greater than minor because it is associated with the procedure quality attribute and affected Mitigating Systems cornerstone objective in that potential valve and other component performance deficiencies could have been masked. The inspectors determined the finding was of very low safety significance because the finding did not result in a loss of safety function. This finding is directly related to the operating experience (OE) implementation aspect of the problem identification and resolution cross-cutting area because the licensee had reviewed prior OE on unacceptable preconditioning, but failed to prevent

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pre-conditioning during the testing sequence. This violation was entered into the licensee's corrective action program as CR 2007102031. (Section 1R22)

B. Licensee-Identified Violations

None.

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REPORT DETAILS

Summary of Plant Status

Unit 1 began the inspection period at or near 100% Rated Thermal Power (RTP). On January 30, Unit 1 shut down due to a condenser tube leak. The unit was return to 100% RTP on February 4 and remained at 100% RTP through the end of the inspection period.

Unit 2 began the inspection period at or near 100% RTP. On February 6, Unit-2 shut down for a refueling outage. Startup began on March 12 with a return to 100% RTP on March 20. The unit remained at 100% RTP through the end of the reporting period.

1. REACTOR SAFETY

Cornerstones: Initiating Events, Mitigating Systems, and Barrier Integrity

1R01 Adverse Weather

a. Inspection Scope

Imminent Adverse Weather. The inspectors reviewed licensee actions in response to the following adverse weather condition. The inspectors reviewed licensee procedure 34AB-Y22-002-0, Abnormal Phenomena, and walked down external plant areas to ensure debris and loose materials were controlled to limit missile hazards, especially near switchyards and safety-related equipment. Documents reviewed are listed in the Attachment.

- High winds and electrical storm on March 2

b. Findings

No findings of significance were identified.

1R04 Equipment Alignment

a. Inspection Scope

Partial Walkdowns. The inspectors performed partial walkdowns of the following three systems when the opposite trains were removed from service. The inspectors checked system valve positions, electrical breaker positions, and operating switch positions to evaluate the operability of the opposite trains or components by comparing the position listed in the system operating procedure to the actual position. Documents reviewed are listed in the Attachment.

- High Pressure Coolant Injection (HPCI) Pump Room Cooler B while HPCI Pump Room Cooler A was removed from service
- Reactor Building Component Cooling Water (RBCCW) B system while RBCCW A system was removed from service

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- Unit 1 Reactor Core Isolation Cooling (RCIC) while Unit 1 HPCI was removed from service

b. Findings

No findings of significance were identified.

1R05 Fire Protection

a. Inspection Scope

Fire Area Tours. The inspectors toured the following 13 risk significant plant areas to assess the material condition of the fire protection and detection equipment, verify fire protection equipment was not obstructed and that transient combustibles were properly controlled. The inspectors reviewed the Fire Hazards Analysis drawings H-11846 and H-11847 to verify that the necessary fire fighting equipment, such as fire extinguishers, hose stations, ladders, and communications equipment, were in place. Documents reviewed are listed in the Attachment.

- Control Building Gen. Area 130'
- East Cableways 130'
- Reactor Protection System (RPS) and Cable Tray Rooms 130'
- Cable Spreading Room 147'
- Annunciator Rooms 130'
- 600 Volt Switchgear Rooms 130'
- Control Building 112'
- RPS Battery Rooms
- Unit 2 Torus Area
- Station Battery Rooms
- Water Analysis Rooms
- AC Inverter Rooms
- Unit 2 Main Steam Chase

b. Findings

No findings of significance were identified.

1R06 Flood Protection Measures

a. Inspection Scope

Internal Flooding. The inspectors reviewed the Final Safety Analysis Report (FSAR) and the individual plant examination to determine the plant areas that were susceptible to internal flooding events. The inspectors performed a detailed walkdown of the following area to determine potential sources of internal flooding and the condition of penetrations and sumps in the rooms. Documents reviewed are listed in the Attachment.

- Unit 2 Reactor Building under torus 87'

b. Findings

No findings of significance were identified.

1R07 Heat Sink Performance

a. Inspection Scope

Annual Resident Review. The inspectors reviewed the results of the licensee inspection of the 1T41-B004A Room cooler. The inspectors verified implementation of licensee procedure 42IT-TET-014-1, Safeguard Equipment Area Cooler Data. Documents reviewed are listed in the Attachment.

b. Findings

No findings of significance were identified.

1R08 Inservice Inspection (ISI) Activities

a. Inspection Scope

Piping Systems ISI. The inspectors observed and reviewed the implementation of the licensee's ISI program for monitoring degradation of the reactor coolant system boundary and the risk significant piping system boundaries for Unit 2. The inspectors selected a sample of American Society of Mechanical Engineers (ASME), Boiler and Pressure Vessel Code, Section XI required examinations and non-Section XI inspections of other code components in order of risk priority, based upon the ISI activities available for review during the onsite inspection period. The inspectors also reviewed a sample of inspection activities associated with components that are outside the scope of ASME Section XI requirements, which are performed in accordance with commitments to follow industry guidance documents, such as the Boiling Water Reactor Vessel and Internals Project (BWRVIP). The inspectors reviewed the Owner's Activity Report 2-3-3-2, dated May 27, 2005, for the last Unit 2 refueling outage.

The inspectors conducted an on-site review of nondestructive examination (NDE) activities to evaluate the licensee's compliance with Technical Specifications (TS); ASME Section XI, and Section V, 2001 Edition through the 2003 Addenda for Class 1, 2, and 3 systems; and BWRVIP documents for the inspection of Reactor Vessel Internals. For Hatch Unit 2, this was the first outage of the first period of the fourth interval. The inspectors verified that indications and defects were appropriately evaluated and dispositioned in accordance with the applicable requirements of the

ASME Section XI Code, and the BWRVIP documents. The inspectors observed the following examinations and reviewed the following examination records.

Manual Ultrasonic Testing

- 2E11-2RHR-16A-DS-8, RHR, Pipe to Elbow
- 2E21-2CS-12A-38, CS, Elbow to Reducer

Visual Examination (VT)

- S07H2V002, Support 2E41-HPCI-R107
- S05H2V019, Strut 2E21-CS-R82
- S05H2V008; Restraint 2P41-DSW-R49

Liquid Penetrant Examination (PT)

- S05H2P001; 2B11/B4 Reactor Pressure Vessel Stabilizer Bracket Number 4
- S05H2P006; 2B11/B4 Reactor Pressure Vessel Stabilizer Bracket Number 4
- S05H2P008; 2B11/B4 Reactor Pressure Vessel Stabilizer Bracket Number 4

Magnetic Particle Examination

- 2B11/2HC-2, Closure Head to Flange Weld

In-Vessel Visual Inspection (IVVI)

- SHD V4 ID @ 320 degrees and SHD V6 Id @ 230 degrees

The inspectors reviewed the following examination records that contained recordable indications.

- PT: S05H2P001; 2B11/B4, Reactor Pressure Vessel Stabilizer Bracket Number 4
- VT-3: S07H2V002; Support 2E41-HPCI-R107
- VT-3; S05H2V019; Strut 2E21-CS-R82
- VT-3; S05H2V008; Restraint 2P41
- IVVI; SHD V4 ID @ 320 degrees and SHD V6 Id @ 230 degrees, BWRVIP component

Qualification and certification records for examiners, inspection equipment, and consumables along with the applicable NDE procedures for the above ISI examination activities were reviewed and compared to requirements stated in ASME Section V, ASME Section XI, BWRVIP documents, and other industry standards.

The inspectors reviewed welding activities associated with Maintenance Work Order (MWO) 2050492802, and Design Change Package 2050492801. The associated ASME Class 2 piping was cut and capped in six locations. The inspectors reviewed the welding procedures, applicable procedure qualification records, welder performance qualification test records, and the in-process welding process control sheets to verify compliance with ASME Section IX requirements. Additionally, the inspectors reviewed the ASME Section III surface examination results for FW 03, FW 04, and FW 05. The following welds were reviewed by the inspectors.

- FW08 / 2050492802-03, 6" pipe cap to reducer, Post LOCA Hydrogen Recombiner System, ASME Class 2

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- FW03 / 2050492802-01, 4" pipe cap to reducer, Post LOCA Hydrogen Recombiner System, ASME Class 2
- FW04 / 2050492802-01, 4" pipe cap to reducer, Post LOCA Hydrogen Recombiner System, ASME Class 2
- FW05 / 2050492802-02, 8" pipe cap to reducer, Post LOCA Hydrogen Recombiner System, ASME Class 2

The inspectors completed a review of ISI related problems that were identified by the licensee and entered into the Corrective Action Program (CAP) to confirm that the licensee had appropriately described the scope of the problems and had implemented appropriate corrective actions. Through interviews with licensee staff and review of CRs, the inspectors evaluated the licensee's threshold for identifying lessons learned from industry issues related to ASME Section XI. Documents reviewed are listed in the Attachment.

b. Findings

No findings of significance were identified.

1R11 Licensed Operator Requalification

a. Inspection Scope

Resident Quarterly Observation. The inspectors observed the performance of licensee simulator scenario LT-SG-51069-01 which included a loss of the 2A 600 volt bus, 2B Reactor Feed Pump trip, Recirc runback, loss of station service air resulting in Main Steam Isolation Valve (MSIV) closure, and a loss of coolant accident. The inspectors reviewed licensee procedures 10AC-MGR-019-0, Procedure Use and Adherence, and DI-OPS-59-0896, Operations Management Expectations, to verify formality of communication, procedure usage, alarm response, control board manipulations, group dynamics, and supervisory oversight. The inspectors attended the post-exercise critique of operator performance to assess if the licensee identified performance issues were comparable to those identified by the inspectors. In addition, the inspectors reviewed the critique results from previous training sessions to assess performance improvement.

b. Findings

No findings of significance were identified.

1R12 Maintenance Effectiveness

a. Inspection Scope

The inspectors reviewed the following two maintenance activities associated with structures, systems, and components to assess the licensee's implementation of the Maintenance Rule (10 CFR 50.65) with respect to the characterization of failures and the appropriateness of the associated (a)(1) or (a)(2) classification. For the equipment

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issues identified below, the inspectors reviewed operator logs, associated CRs, MWOs and the licensee's procedures for implementing the Maintenance Rule. The review was to determine if equipment failures were being identified, properly assessed, and corrective actions established to return the equipment to a satisfactory condition. Documents reviewed are listed in the Attachment.

- Unit 1 Emergency Diesel Generators (EDG)
- Unit 2 Instrument Air System

b. Findings

No findings of significance were identified.

1R13 Maintenance Risk Assessments and Emergent Work Evaluation

a. Inspection Scope

The inspectors reviewed the following five Plan of the Day (POD) documents listed below to verify that risk assessments were performed prior to components being removed from service. The inspectors reviewed the risk assessment and risk management controls implemented for these activities to verify they were completed in accordance with licensee procedure 90AC-OAM-002-0, Scheduling Maintenance, and 10 CFR 50.65 (a)(4). For emergent work the inspectors assessed whether any increase in risk was promptly assessed and that appropriate risk management actions were implemented.

- POD for the week of 2/2-8
- POD for the week of 2/9-15
- POD for the week of 2/16-22
- POD for the week of 3/3-9
- POD for the week of 3/17-23

b. Findings

No findings of significance were identified.

1R15 Operability Evaluations

a. Inspection Scope

The inspectors reviewed the following eight operability evaluations and compared the evaluations to the system requirements identified in the TS and the FSAR to ensure operability was adequately assessed and the system or component remained available to perform its intended function. Also, the inspectors assessed the adequacy of compensatory measures implemented as a result of the condition. Documents reviewed are listed in the Attachment.

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- Standby Plant Service Water Pump Discharge Check valve failed to close
- Unit 2 RHR Flow instrument failed Remote Shutdown Functional Test
- Lubrication Oil leak on 1B EDG
- 2E11-F010 breaker does not stay closed
- 1E11-F004B RHR valve seat tabs of unknown material
- Concrete dust contamination of 2E11-F021A
- Debris in drywell spray nozzles
- MCR pressure boundary door maintained open

b. Findings

Introduction. An NRC-identified Severity Level IV NCV was identified for an inadequate 10 CFR 50.59 evaluation. The licensee proceduralized manual actions in place of automatic action to close the door to an adjacent office to maintain the MCR pressure boundary operable without prior NRC review and approval.

Description. MCR pressurization is an automatic safety function to maintain the MCR habitable during accidents. Following the addition of office space adjacent to the MCR, a safety evaluation was approved by the Plant Review Board on May 4, 1989, which allowed the door, which is part of the MCR pressure boundary, to remain open at all times. The safety evaluation was performed to allow procedurally directed manual operator actions to close the door in the event MCR pressurization was required. After further review, the inspectors concluded the 10 CFR 50.59 evaluation did not adequately address using manual operator actions. Because possible failure mechanisms of the door and possible operator error were not previously considered, the use of manual actions required prior NRC review and approval prior to implementation. The licensee restored the MCR pressure boundary to operable status by closing the door.

Analysis. Violations of 10 CFR 50.59 potentially impact the NRC's ability to perform its regulatory function. Therefore, this finding was subject to traditional enforcement. This finding was determined to be of very low safety significance because the door only impacted the radiological response of the MCR, the door was capable of being closed, and procedural guidance was in place to close the door. In accordance with the NRC Enforcement Policy, Supplement I.D.5, this is a Severity Level IV violation. No cross-cutting aspect was identified as this finding is not indicative of current licensee performance.

Enforcement. 10 CFR 50.59(d)(1) requires, in part, that a written evaluation which provides the bases for the determination that a change, test or experiment does not require a license amendment pursuant to 10 CFR 50.59(c)(2). Contrary to the above, on May 4, 1989, the licensee failed to perform an adequate 10 CFR 50.59 evaluation. This violation is of very low safety significance and has been entered into the licensee's corrective action program as CR 2006112331. This Severity Level IV violation is being treated as an NCV consistent with Section VI.A. of the NRC Enforcement Policy and is identified as NCV 05000321,366/2007002-01, Manual Operator Actions Allowed Due To An Inadequate 10 CFR 50.59 Evaluation. This closes Unresolved Item (URI) 05000321,366/2006005-01, Main Control Room Pressure Boundary Operability.

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1R19 Post Maintenance Testinga. Inspection Scope

For the following five post maintenance tests, the inspectors reviewed the test scope to verify the test demonstrated the work performed was completed correctly and the affected equipment was functional and operable in accordance with TS requirements. Following the maintenance activities, the inspectors reviewed equipment status and alignment to verify the system or component was available to perform the required safety function. Documents reviewed are listed in the Attachment.

- 2E11-F007A RHR Pump minimum flow valve closing coil replacement
- 1C RHR Service Water Pump pre-lube check valve repair
- Breaker 2R24-SO12 Frame 3 preventive maintenance
- 2P41F040A&B RCIC Room Cooler Control Valve disassembly and reassembly
- 2B21F028C Outboard MSIV disassembly, repair and reassembly

b. Findings

No findings of significance were identified.

1R20 Refueling and Outage Activitiesa. Inspection Scope

Unit 2 Refueling Outage. The inspectors reviewed the licensee's shutdown risk monitoring program and the outage schedule to verify the licensee's use of risk management techniques, incorporation of operating experience, and past lessons learned for the refueling outage beginning February 6, 2007. Additionally, the inspectors reviewed the shutdown safety assessment to verify the licensee had contingency plans and these plans included sufficient equipment to maintain a defense-in-depth approach to safety. The inspectors routinely verified the licensee was correctly maintaining required equipment in service in accordance with the overall outage safety assessment. During the refueling outage, the inspectors monitored licensee control over the outage activities listed below. Documents reviewed are listed in the Attachment.

- Reactor Coolant System cooldown following shutdown to verify the cooldown rate did not exceed TS limits
- 3 clearances to verify implementation of the clearance process and the associated equipment was properly configured to support the function of the clearance
- Fuel movement
- TS and licensee procedural requirements were met prior to mode changes
- Walkdown of the drywell and torus proper and other areas to verify material conditions supported plant operations
- Plant startup, heatup, and power ascension
- Shutdown Margin determination

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- Licensee identification and resolution of problems related to outage activities

Unit 1 Forced Outage. The inspectors reviewed the activities associated with the shutdown and subsequent startup following repairs to the main condenser. The inspectors observed activities including reactivity management, verification of mode change requirements, personnel error prevention techniques and control room communication performance.

b. Findings

No findings of significance were identified.

1R22 Surveillance Testing

a. Inspection Scope

The inspectors reviewed licensee surveillance test procedures and either witnessed the test or reviewed test records for the following five surveillances to determine if the scope of the test adequately demonstrated the affected equipment was operable. The inspectors reviewed these activities to assess for preconditioning of equipment, procedure adherence, and equipment alignment following completion of the surveillance. The inspectors reviewed licensee procedure AG-MGR-21-0386N, Evolution and Pre-and Post-Job Brief Guidance, and attended selected briefings to determine if procedure requirements were met. Documents reviewed are listed in the Attachment.

Surveillance Tests

- 34SV-SUV-013-0 Weekly Breaker Alignment Checks
- 34SV-SUV-023-1 Jet pump and Recirculation flow Mismatch Operability
- 34SV-T48-002-2 Suppression Chamber to Drywell Vacuum Breaker Operability and Containment Purge/Vent Valve Position Check

In-Service Test

- 34SV-E21-001-1/-002-1 Core Spray Pump and Valve Operability

Containment Isolation Valve Test

- 42SV-TET-001-1 Primary Containment Periodic Type B and type C Leakage Tests for 2B21F022C as-left test

b. Findings

Introduction. An NRC-identified NCV of 10 CFR Part 50, APP B, Criterion XI, Test Control, was identified for pre-conditioning of the RHR/CS pump room cooler valves. The surveillance test procedure sequence caused these valves to be opened and closed prior to performing the documented stroke time testing.

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Description. Surveillance procedure 34SV-E21-001-1, Core Spray Pump Operability, sequenced the pump operability test prior to performing the room cooler operability test. During the pump test, the room cooler valves automatically opened when the pump was started and closed when the pump was stopped. The stroke time of these valves was measured during the room cooler operability test. Therefore, cycling of these valves during the pump test had the potential to mask the actual as-found condition of the valves and possibly result in an inability to verify valve operability. The inspectors considered the manner in which this test was conducted to constitute unacceptable preconditioning of the valves. The surveillance testing procedures have been revised to prevent the pre-conditioning of the RHR/CS room cooler valves.

Analysis. The inspectors determined this finding is greater than minor because it is associated with the procedure quality attribute and affected Mitigating Systems cornerstone objective in that potential valve and other component performance deficiencies could have been masked. The inspectors determined the finding was of very low safety significance (Green) because the finding did not result in a loss of safety function. This finding is directly related to the OE implementation aspect of the problem identification and resolution cross-cutting area because the licensee had reviewed prior OE on unacceptable preconditioning, but failed to prevent pre-conditioning during the testing sequence.

Enforcement. 10CFR Part 50, Appendix B, Criterion XI, Test Control, states, in part, that a test program shall be established to assure that all testing required to demonstrate that structures, systems, and components will perform satisfactorily in service is identified and performed in accordance with written test procedures which incorporate the requirements and acceptance limits contained in applicable design documents. Contrary to this, on January 29 the licensee's test procedure 34SV-E21-001-1 Core Spray Pump Operability did not prevent pre-conditioning of the room cooler valves. Because this finding is of very low safety significance and because it was entered into the licensee's corrective action program as CR 2007102031, this violation is being treated as an NCV consistent with Section VI.A.1 of the NRC Enforcement Policy: NCV 05000321,366/2007002-02, Pre-conditioning of RHR/CS Room Cooler Valves.

2. RADIATION SAFETY
Cornerstone: Occupational Radiation Safety

2OS1 Access Control To Radiologically Significant Areas

a. Inspection Scope

Access Controls. The inspectors evaluated licensee guidance and its implementation for controlling worker access to radiologically significant areas and monitoring jobs in-progress associated with the Unit 2 Cycle 19 Refueling Outage (2R19). The inspectors directly observed implementation of administrative and physical radiological controls; evaluated radiation worker (radworker) and Health Physics Technician (HPT) knowledge of and proficiency in implementing radiation protection requirements; and assessed worker exposures to radiation and radioactive material.

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During facility tours, the inspectors directly observed postings and physical controls for radiation areas, High Radiation Areas (HRAs), and potential airborne radioactivity areas established within the Radiologically Controlled Area (RCA) of the Unit 2 drywell; Unit 1 and Unit 2 Reactor Buildings; Unit 1 and Unit 2 turbine buildings; and radioactive waste (radwaste) processing and storage locations. The inspectors independently measured radiation dose rates or directly observed conduct of licensee radiation surveys for selected RCA areas. Results were compared to current licensee surveys and assessed against established postings and Radiation Work Permit (RWP) controls. Licensee key control and access barrier effectiveness were evaluated for selected Unit 1 and Unit 2 Locked High Radiation Area (LHRA) and Very High Radiation Area (VHRA) locations. Procedural guidance for LHRA and VHRA controls was discussed with Health Physics (HP) supervisors. Controls and their implementation for storage of irradiated material within the Unit 1 and Unit 2 Spent Fuel Pools (SFP) were observed and discussed in detail. Established radiological controls were evaluated for selected 2R19 tasks including Control Rod Drive (CRD) changeout and transport, torus diving, turbine generator maintenance activities, MSIV testing, radwaste processing and storage, and miscellaneous activities in the Unit 2 Reactor Building. In addition, licensee controls for areas where dose rates could change significantly as a result of plant shutdown and refueling operations were reviewed and discussed.

For selected tasks, the inspectors attended pre-job briefings and reviewed RWP details to assess communication of radiological control requirements to workers. Occupational workers' adherence to selected RWPs and HPT proficiency in providing job coverage were evaluated through direct observations and interviews with licensee staff. Electronic dosimeter (ED) alarm set points were evaluated against area radiation survey results for torus diving, CRD changeout, and work on the MSIVs.

The inspectors evaluated the effectiveness of radiation exposure controls, including air sampling, barrier integrity, engineering controls, and postings through a review of both internal and external exposure results. Worker exposure as measured by ED and by evaluations of skin dose resulting from discrete radioactive particle or dispersed skin contamination events during current refueling activities were reviewed and assessed. For HRA tasks involving significant dose rate gradients, e.g. CRD changeout, the inspectors evaluated the use and placement of whole body and extremity dosimetry to monitor worker exposure. The inspectors also reviewed and discussed selected whole-body count analyses conducted during the refueling outage.

Radiation protection activities were evaluated against the requirements of FSAR Section 12; TS Sections 5.4 and 5.7; 10 CFR Parts 19 and 20; and approved licensee procedures. Records reviewed are listed in the Attachment. The inspectors completed 21 samples.

Problem Identification and Resolution. Licensee CAP documents associated with access control to radiologically significant areas were reviewed and assessed. This included review of selected CRs related to radworker and HPT performance. The inspectors evaluated the licensee's ability to identify, characterize, prioritize, and resolve the identified issues in accordance with procedure NMP-GM-002-001, Corrective Action

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Program Instructions, Ver. 1.0. The inspectors also evaluated the scope of the licensee's internal audit program and reviewed recent audit results. Documents reviewed are listed in the Attachment.

b. Findings

No findings of significance were identified.

2OS2 As Low As Reasonably Achievable (ALARA) Planning and Controls

a. Inspection Scope

ALARA. The inspectors reviewed ALARA program guidance and its implementation for ongoing 2R19 job tasks. The inspectors evaluated the accuracy of ALARA work planning and dose budgeting, observed implementation of ALARA initiatives and radiation controls for selected jobs in-progress, assessed the effectiveness of source-term reduction efforts, and reviewed historical dose information.

ALARA planning documents and procedural guidance were reviewed, and projected hours and dose estimates were compared to actual dose and hour expenditures for the following high dose jobs: reactor pressure vessel disassembly/reassembly, CRD removal/replacement, torus diving, MSIV maintenance activities, refueling floor fuel sipping/scraping/reconstitution and storage, and refueling floor 360 degree platform activities including reactor pressure vessel ISI. Differences between budgeted dose and actual exposure received were discussed with cognizant ALARA staff. Mid-task reviews and changes to dose budgets relative to changes in radiation source term and/or job scope were also discussed. The inspectors attended pre-job briefings and evaluated the communication of ALARA goals, RWP requirements, and industry lessons-learned to responsible personnel.

The inspectors made direct field or closed-circuit-video observations of outage job tasks involving MSIV, maintenance, ISI, refueling, fuel inspection, torus diving, and CRD removal/replacement tasks. For the selected tasks, the inspectors evaluated radworker and HPT job performance; individual and collective dose expenditure versus percentage of job completion; surveys of the work areas; appropriateness of RWP requirements; and adequacy of implemented engineering controls. For selected tasks, the inspectors interviewed radworkers and job sponsors regarding understanding of dose reduction initiatives and their current and expected accumulated doses at completion of the job tasks.

Implementation and effectiveness of selected program initiatives with respect to source-term reduction were evaluated. Chemistry and maintenance program ALARA initiatives and their effect on Unit 2 drywell dose rate trends were reviewed. The effectiveness of temporary shielding installed for the current outage was assessed through review of shielding request packages and pre-shielding versus post-shielding dose rate data. The inspectors also reviewed and discussed results of maintenance house-keeping activities, and 'hot spot' reduction initiatives during the current outage.

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Plant exposure history for calendar year (CY) 2001 through CY 2006 and data reported to the NRC pursuant to 10 CFR 20.2206 were reviewed, as were established goals for reducing collective exposure during the current 2R19 outage. The inspectors reviewed procedural guidance for dosimetry issuance and exposure tracking. The inspectors also reviewed selected individual access records for dose received during work in areas with high dose rates and dose rate gradients. In addition, dose records of declared pregnant workers were examined to evaluate assignment of gestation dose.

ALARA program activities and their implementation were reviewed against 10 CFR Part 20, and approved licensee procedures. In addition, licensee performance was evaluated against guidance contained in Regulatory Guide (RG) 8.8, Information Relevant to Ensuring that Occupational Radiation Exposures at Nuclear Power Stations will be As Low As Reasonably Achievable and RG 8.13, Instruction Concerning Prenatal Radiation Exposure. Documents reviewed are listed in the Attachment. The inspectors completed 15 samples.

Problem Identification and Resolution. The inspectors reviewed selected CR and audit documents in the area of ALARA program implementation. The inspectors evaluated the licensee's ability to identify, characterize, prioritize, and resolve the identified issues in accordance with procedure NMP-GM-002-001, Corrective Action Program Instructions, Ver. 1.0. Documents reviewed are listed in the Attachment.

b. Findings

No findings of significance were identified.

Cornerstone: Public Radiation Safety

2PS1 Radioactive Gaseous and Liquid Effluent Treatment and Monitoring Systems

a. Inspection Scope

Groundwater Monitoring. The inspectors discussed current and future programs for onsite groundwater monitoring with Chemistry supervisors and corporate Health Physicists, including number and placement of monitoring wells and identification of plant systems with the most potential for contaminated leakage. In addition, the inspectors reviewed procedural guidance for identifying and assessing onsite spills and leaks of contaminated fluids.

In 2006, hydrological studies were performed to determine the optimum location for new groundwater sample points. Currently, the licensee maintains 40 onsite groundwater monitoring wells with samples taken at various frequencies. Analyses are performed for tritium and, for selected samples, primary gamma emitters and gross beta. To date, tritium has been the only radionuclide identified in the well samples. Historically, the primary source of leakage has been from Unit 1 condensate storage tank pumps and associated piping. While contamination levels near the tank have been high at various

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times in the past, no levels exceeding NRC or Environmental Protection Agency (EPA) limits have been reported in the offsite environs.

The licensee continues to take measurements in an onsite swamp that was contaminated during a SFP leakage event in 1986. The licensee issues supplemental environmental monitoring reports at varying frequencies (the next is due in 2008) that contain the results of these swamp measurements. To date, no contamination levels have been reported above NRC or EPA limits. The inspectors completed one sample.

b. Findings

No findings of significance were identified.

2PS2 Radioactive Material Processing and Transportation

a. Inspection Scope

Waste Processing and Characterization. During inspector walk-downs, accessible sections of the liquid and solid radwaste processing systems were assessed for material condition and conformance with system design diagrams. Inspected equipment included Waste Collector Tanks, resin transfer piping, resin packaging and dewatering components, and abandoned centrifuge equipment. The inspectors also observed processing of potentially contaminated bagged waste and sluicing of resin from a Spent Resin Tank to a shipping liner. The inspectors discussed component function, processing system changes, and radwaste program implementation with system operators.

The 2005 Effluent Report and radionuclide characterizations from 2006 - 2007 for each major waste stream were reviewed and discussed with radwaste staff. For resinous waste and Dry Active Waste (DAW) the inspectors evaluated analyses for hard-to-detect nuclides, reviewed the use of scaling factors, and examined comparison results between licensee waste stream characterizations and outside laboratory data. Waste stream mixing and concentration averaging methodology for powdered and bead resin was evaluated and discussed with shipping/radwaste staff. The inspectors also reviewed the licensee's procedural guidance for monitoring changes in waste stream isotopic mixtures.

Radwaste processing activities and equipment configuration were reviewed for compliance with the licensee's Process Control Program (PCP) and FSAR, Chapter 11. Waste stream characterization analyses were reviewed against regulations detailed in 10 CFR Part 20, 10 CFR Part 61, and guidance provided in the Branch Technical Position on Waste Classification and Waste Form. Documents reviewed are listed in the Attachment.

Transportation. The inspectors directly observed preparation activities for shipments of contaminated trash, CRDs, and resin. The inspectors noted package markings and

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placarding, performed independent dose rate measurements, and interviewed shipping technicians regarding Department of Transportation (DOT) regulations.

Five shipping records were reviewed for consistency with licensee procedures and compliance with NRC and DOT regulations. The inspectors reviewed shipping paper emergency response information, DOT shipping package classification, NRC waste classification, radiation survey results, and evaluated whether receiving licensees were authorized to accept the packages. Licensee procedures for handling Type B shipping casks were compared to recommended vendor protocols and Certificate of Compliance (CoC) requirements. Required engineering documents and closure protocols for Type A boxes used to ship CRDs were also reviewed. In addition, training records and training curricula for selected individuals currently qualified to ship radioactive material were reviewed.

Transportation program implementation was reviewed against regulations detailed in 10 CFR Part 20, 10 CFR Part 71, 49 CFR Parts 172-178, as well as the guidance provided in NUREG-1608. Training activities were assessed against 49 CFR Part 172 Subpart H. Documents reviewed are listed in the Attachment. The inspectors completed six samples.

Problem Identification and Resolution. Selected CRs in the area of radwaste/shipping were reviewed in detail and discussed with licensee personnel. The inspectors assessed the licensee's ability to characterize, prioritize, and resolve the identified issues in accordance with procedure NMP-GM-002-001, Corrective Action Program Instructions, Ver. 1.0. The inspectors also evaluated the scope of the licensee's internal audit program and reviewed recent audit results. Documents reviewed are listed in the Attachment.

b. Findings

No findings of significance were identified.

4. OTHER ACTIVITIES

4OA1 Performance Indicator (PI) Verification

a. Inspection Scope

The inspectors sampled licensee data for the PIs listed below. To verify the accuracy of the PI data reported during the period reviewed, PI definitions and guidance contained in NEI 99-02, Regulatory Assessment Indicator Guideline, Rev. 4 were used to verify the basis for each data element. Documents reviewed are listed in the Attachment.

Occupational Radiation Safety Cornerstone

- Occupational Exposure Control Effectiveness

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The inspectors reviewed the PI results from July 2006 through December 2006. The inspectors assessed CAP records to determine whether HRA, VHRA, or unintended radiation exposures, resulting in TS or 10 CFR Part 20 non-conformances, had occurred. In addition, the inspectors reviewed selected personnel contamination event data, internal dose assessment results, and electronic dosimeter alarms associated with dose rates exceeding one rem per hour and cumulative doses exceeding established set-points from July 2006 through January 2007.

Public Radiation Safety Cornerstone

- Radiological Effluent Technical Specification/Offsite Dose Calculation Manual
Radiological Effluent

The inspectors reviewed the PI results from July 2006 through December 2006. The inspectors reviewed CAP documents, effluent dose data, and licensee procedural guidance for classifying and reporting PI events. The inspectors also interviewed licensee personnel responsible for collecting and reporting the PI data.

b. Findings

No findings of significance were identified.

4OA2 Identification and Resolution of Problems

.1 Daily Screening of Corrective Action Items

As required by Inspection Procedure 71152, Identification and Resolution of Problems, and in order to help identify repetitive equipment failures or specific human performance issues for follow-up, the inspectors performed a daily screening of items entered into the licensee's corrective action program. This review was accomplished by either attending daily screening meetings that briefly discussed major CRs, or accessing the licensee's computerized corrective action database and reviewing each CR that was initiated.

.2 Annual Sample Review

a. Inspection Scope

The inspectors performed a focused review of the actions taken to correct the deficiencies in the local leak rate testing of MSIVs revealed during the 2005 Unit 2 refueling outage and identified in CR 2005101217. These corrective actions included:

- Operating procedures to be revised to have the inboard MSIV closure prior to the outboard MSIV closure
- Leak rate test procedures to be revised to include checking the pressure of the test volume by isolating the air supply and using proven methods to ensure the test volume is adequately pressurized
- Enhancing efforts to determine the root cause

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- Initiating repetitive tasks to set up a periodic AOV diagnostic testing schedule for MSIVs.

Leak rate tests conducted during the recent 2006 refueling outage incorporated these corrective actions. Documents reviewed are listed in the Attachment.

b. Findings and Observations

No findings of significance were identified.

4OA3 Event Followup

1. (Closed) Licensee Event Report (LER) 05000321/2005-002, Main Transformer Failure Causes Turbine Trip and Reactor Scram. On October 29, 2005, the Unit 1 Main Transformer experienced an internal fault, causing a load reject signal from the protection signal to trip the reactor and main turbine from 100% power. The transformer caught fire, and was extinguished with onsite personnel and automatic equipment. This condition was documented in CR 2005110536, 2005110562 and 2005110562. No findings of significance were identified.
2. (Closed) LER 05000321/2005-003, Discrepancy in Nuclear Material Inventory. During a review of special nuclear material (SNM) inventory and accounting records, a discrepancy was discovered between the amount of spent fuel in the spent fuel pool and the amount recorded within the SNM physical inventory records. Following an extensive pool cleanup and inspection, the licensee discovered a total of about 19 inches of fuel rod were missing. The NRC conducted followup inspections (see NRC Inspection Report 05000321/2006014 and 05000366/2006014) and issued a severity level II violation with a civil penalty of \$104,000. All corrective actions associated with this issue were addressed through the issued report.
3. (Closed) LER 05000321/2006-001, Inadequate Surveillance Procedure Acceptance Criteria Resulted in Exceeding Secondary Containment Drawdown Time. On February 17, 2006, the licensee discovered a surveillance to test the drawdown time of secondary containment did not account for diesel start time. Since this surveillance had always been performed with an energized bus, the licensee did not allow for the 12 seconds required for the EDG start time. As a result, the 120-second required drawdown time had been exceeded for 757 days before discovery. The surveillance procedure was revised to account for the 12 second EDG start time, and re-performed satisfactorily. No findings of significance were identified.
4. (Closed) LER 05000366/2006-001, Component Failure Leads to Inoperability of the HPCI System. On January 16, 2006, the Unit 2 HPCI steam supply outboard isolation valve closed because a component on the control card had failed. The component was replaced and functional testing completed, and HPCI declared operable on January 17, 2006. No findings of significance were identified.

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4OA5 Other Activities

a. Inspection Scope

Independent Spent Fuel Storage Installation (ISFSI) Radiological Controls. The inspectors observed gamma-ray, neutron, and contamination surveys of the ISFSI facility and compared the results to previous surveys and TS limits. The inspectors also observed and evaluated implementation of radiological controls, including RWPs and postings, and discussed the controls with HPTs and HP supervisory staff. Procedural guidance for ISFSI radiological controls and selected CRs were also reviewed and discussed. Radiological control activities for ISFSI areas were evaluated against 10 CFR Part 20, 10 CFR Part 72, ISFSI TS, and ISFSI CoC. Documents reviewed are listed in the Attachment.

b. Findings

No findings of significance were identified.

4OA6 Meetings, Including Exit

.1 Exit Meeting

On April 13, the inspectors presented the inspection results to Mr. Dennis Madison and other members of his staff who acknowledged the findings. The inspectors confirmed proprietary information was not provided or examined during the inspection.

.2 Annual Assessment Meeting Summary

On April 17, the Chief of Reactor Projects Branch 2 and the Senior Resident Inspector assigned to the Edwin I. Hatch Nuclear Plant met with Southern Nuclear Operating Company to discuss the NRC's Reactor Oversight Process and the NRC's annual assessment of HNP safety performance for the period of January 1, 2006 - December 31, 2006. The major topics addressed were: the NRC's assessment program and the results of the licensee's assessment. A listing of meeting attendees and information presented during the meeting are available from the NRC's document system (ADAMS) as accession number ML071090488. ADAMS is accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html>.

ATTACHMENT: SUPPLEMENTAL INFORMATION

Enclosure

SUPPLEMENTAL INFORMATION

KEY POINTS OF CONTACT

Licensee personnel

M. Ajluni, Plant Support Manager
J. Dixon, Health Physics Manager
S. Douglas, Plant Manager
B. Goodwin, Engineering Manager
G. Johnson, Operations Manager
J. Lewis, Training and Emergency Preparedness Manager
D. Madison, Vice President - Hatch
J. Thompson, Nuclear Security Manager
R. Varnadore, Maintenance Manager

LIST OF ITEMS OPENED AND CLOSED

Opened and Closed

05000321,366/2007002-01	NCV	Manual Operator Actions Allowed Due To An Inadequate 10 CFR 50.59 Evaluation (Section 1R15)
05000321,366/2007002-02	NCV	Pre-conditioning of RHR/CS Room Cooler Valves (Section 1R22)

Closed

05000321/2005-002	LER	Main Transformer Failure Causes Turbine Trip and Reactor Scram (Section 4OA3.1)
05000321/2005-003	LER	Discrepancy in Nuclear Material Inventory (Section 4OA3.2)
05000321/2006-001	LER	Inadequate Surveillance Procedure Acceptance Criteria Resulted in Exceeding Secondary Containment Drawdown Time (Section 4OA3.3)
05000366/2006-001	LER	Component Failure Leads to Inoperability of the HPCI System (Section 4OA3.4)
05000321,366/2006-005	URI	Main Control Room Pressure Boundary Operability (Section 1R15)

LIST OF DOCUMENTS REVIEWED

Section 1R01: Adverse Weather

CRs: 2006112000, 2006101158
Control Room Operator Logs dated March 3, 2007

Section 1R04: Equipment Alignment

Technical Requirements Manual section 3.7.2

Drawings: H-26051, H-26071, H-27756, H-26054, H-11609, H-16334, H-16335

Procedures: 34SO-E41-001-2 High Pressure Coolant Injection System

34SO-P42-001-2 Reactor Building Closed Cooling Water System

34SO-E51-001-1 Reactor Core isolation Cooling System

FSAR Section 9.4.2.2.3, T9.4-3, 9.2.2, 4.7

Section 1R05: Fire Protection

CRs: 2007101363, 2007101402

Drawings: A-43965 sheets 005B, 007B, 010B, 011B, 012B, 017B, 018B, 013B, 020B, 014B, 015B, 021B, 022B, 008B, 019B, 023B, 024B, 025B, 035B, 026B, 027B, 036B, 034B, 034D, 043B, 044B, 028B, 029B, 037B, 038B, 104B, 105B, 108B

Section 1R06: Flood Protection Measures

CRs: 2007103538, 2007103410, 2007102805, 2007101901, 2007101113, 2006112369

Section 1R07: Heat Sink Performance

MWO: 1052386301

Surveillance: 1-4214-1

CRs: 2007102946, 2006112086

Section 1R08: Inservice Inspection Activities

Procedures

52CM-SPR-001-0; Temporary Leak Repair of Piping and Components, Version 4.2

42EN-ENG-014-0, ASME Section XI Repair/Replacement, Version 18.0

NMP-ES-024-203, Version 1.0, Visual Examination (VT-3)

NMP-ES-024-502, PDI Generic Procedure for the Ultrasonic Examination of Ferritic Pipe Welds (appendix VIII), Version 2.0

NMP-ES-024-301, Liquid Penetrant Examination Color Contrast and Fluorescent, Version 3.0

Welding Procedure Qualification Record 510, Revision 0

Welding Procedure Qualification Record 547, Revision 0

Welding Procedure Qualification Record 507, Revision 0

Welding Procedure Specification T110A-1, Revision 2

Corrective Action Documents (Condition Reports (CR)) and Action Items (AI)

CRs: 2007102280, 2007100568, 2006106626, 2006106625, 2006104212, 2007101700, 2006104365, 2006103430, 2006105422, 2006104945, 2007100472, 2006103085, 2006101270

AI's: 2006201067 and 2005203262

Other

2-3-3-2; OAR-1 Owner's Activity Report, May 27, 2005

Section 1R12: Maintenance Effectiveness

System Health Report for 1R43

System Health Report for 2P52

NMP-ES-002, System Monitoring and Health Reporting

MWOs: 1000298501, 1000298701, 1041674801, 1041674901, 1041675001, 1041675101, 1041675201, 1041676301, 1041676401, 1042059501, 1042059601, 1042059801, 1042797601, 1042848201, 1042848301, 1042848401, 1042848501, 1042994001, 1042994101, 1042995701, 1050402501, 1051071201, 1051071202, 1051459901, 1051674601, 1051674701, 1051674801, 1052609901, 1052609902, 1052609801, 1052609802, 1060789301, 1061670001, 1061670101, 1061670201, 2050565301, 2050607101, 2050689701, 2050779101, 2050942701, 2051114405, 2060030201, 2060197201, 2060291801, 2060301901, 2060303501, 2070427201

CRs: 2004: 3030, 7709, 7726, 7735, 7737, 7739, 7860, 11628, 11918, 12111

2005: 2586, 2934, 3156, 3653, 4244, 4262, 4489, 4494, 4496, 4492, 4491, 4497, 6237, 9507, 10145, 10306, 10316, 10450, 12246

2006: 0516, 0694, 1235, 1260, 2023, 3112, 5330, 5637, 5926, 5956, 6026, 6237, 6251, 6252, 7588, 8137, 8211, 8225, 8547, 8675, 8703, 9216, 9768, 10782, 10783

2007: 0578, 1508, 2488, 2585

Procedures: 34SV-R43-013-1

Section 1R15: Operability Evaluations

CRs: 2007100686, 2007100285, 2006112059, 2006109549, 2007100980, 2007102537, 2007102533, 2007102680, 2007100472, 2007102190, 2007102258, 2006101650, 2006101674, 2007102258, 2006112331

MWO: 1070576601, 2060422701, 2070575901, 1050381108, 1860365501

SX13147, Diesel Generator Service Manual

Drawings: S111479

Engineering Evaluations: 1093, 1330

Section 1R19: Post Maintenance Testing

CRs 2006111667, 2006111654, 2006111647

MWOs: 1061029701, 1042564701, 1042564901, 1039000117, 1061285801, 1061754901, 1051438003, 2060101401, 2041325805, 2061602103

Procedures: 34SV-E11-002-2, RHR Valve Operability

52CM-MNT-034-0, Allis Chalmers Low Voltage MCC Corrective Maintenance

52CM-MEL-005-0, Fuse Replacement

51GM-MNT-058-0, Piston Lift Check Valve Maintenance

34SO-E11-004-1, RHR Service Water Pump Operability

42IT-TET-012-2S, Plant Service Water, and RHR Service Water Piping Inspection Procedure

57CP-CAL-250-0, AOV Stroke/Positioner Test and Setup

52CM-MME-017-0, Fisher Control Design ED, EAD, ES, EAS, ET, EAT, EWD, EWT Valves

52SV-MEL-001-2, MCCB(S) Protecting Primary Containment Penetration Conductors

34SV-E51-002-2, RCIC Pump Operability

95IT-OTM-001-0, Maintenance Work Order Functional Test Guideline

42SV-TET-001-0, Primary Containment Periodic Type B & C Leakage Tests

Section 1R20: Refueling and Outage Activities

Clearances: 2-DT-06-2E11-00310, 2-DT-07-2E51-00329, 2-DT-07-2R24-00560

Procedures: 34AB-G41-001-2, Loss of Fuel Pool Cooling

34AB-G41-002-2, Decreasing RX Well/Fuel Pool Water Level

34AB-J11-001-2, Irradiated Fuel Damage During Handling

34AR-601-127-1, New Fuel Storage Area Radiation High

34GO-OPS-013-1/2, Normal Plant Shutdown

34-GO-OPS-001-1/2, Plant Startup

Section 1R22: Surveillance Testing

Procedures: Hatch 4th 10 Year Interval Valve Testing Plan

Hatch 4th 10 Year Interval Valve Testing Plan Basis Document

NUREG 1482 Revision 1, Guidelines For Inservice Testing at Nuclear Power Plants

CR: 2007102031

Internal correspondence: Response to NRC IN 97-16: "Preconditioning of Plant Structures, Systems, and Components before ASME Code Inservice Testing or Technical Specifications Surveillance Testing", dated July 1, 1998.

Section 2OS1: Access Control To Radiologically Significant Areas

Procedures, Guidance Documents, and Manuals

62RP-RAD-016-0, Very High and High Radiation Area Access Control, Ver. 22.0

62RP-RAD-022-0, Diving Procedure, Ver. 11.2

62RP-RAD-008-0, Radiation and Contamination Surveys, Rev. 11.2

NMP-GM-002-001, Corrective Action Program Instructions, Ver. 1.0

Records and Data

Personnel Contamination Logs, 2/5/07 - 3/1/07

Whole Body Count Records, 2/5/07 - 3/1/07

RWP No. 07-2001, Unit 2 Reactor Building/Radwaste/Outside Areas, Routine Inspection/Repair, Rev.0

RWP No. 07-2014, Torus Diving, Rev. 0

RWP No. 07-2611, Unit 2 Drywell MSIV Inspection and Repair, Rev. 0

RWP No. 07-2615, Control Rod Drive Change Out and Support Activities, Rev. 0

Survey No. 30601, Unit 2 Reactor Building Overhead, 1/26/07

Survey No. 31202, Unit 2 Subpile Room, 2/8/07

Survey No. 31289, Unit 2 SE Diagonal, 2/10/07

Survey No. 31402, Unit 2 360 Degree Platform, 2/11/07

Survey No. 31487, Unit 2 Torus Proper (Underwater), 2/13/07

Survey No. 31709, Control Rod Drive Serial No. 1505, 2/15/07

Survey No. 31864, Unit 2 MSIV 'C', 2/17/07

Survey No. 32340, Items Stored in Unit 1/Unit 2 SFPs, 2/24/07

CAP Documents

H-HP-2005, Health Physics Audit, 5/19/05

CRs: 2006108191, 2006108837, 2006109734, 2006111975, 2007101294, 2007102597

Section 2OS2: As Low As Reasonably Achievable

Procedures, Manuals, Guidance Documents

62HI-OCB-028-0, Use and Calibration of Whole Body Counters, Ver. 14.3

DI-HPX-17-1104, PM7 Alarm Response and Whole Body Count Analysis, Ver. 1.4

60AC-HPX-001-0, Radiation Exposure Limits, Rev. 10.3

60AC-HPX-009-0, ALARA Program, Rev. 17.6

62RP-RAD-001-0, Dosimetry Issuance and Tracking, Rev. 14.3

62RP-RAD-004-0, Personnel Decontamination, Rev. 13.2

62RP-RAD-012-0, Selection and Use of Temporary Shielding, Rev. 1.2

62RP-RAD-044-0, Identification and Tracking of Hot Spots, Rev. 3.1

64CH-SAM-0250, Reactor Coolant Sampling and Analysis, Ver. 14.2
52CM-MME-067-0, Globe Valve Maintenance, Ver. 3.6

NMP-GM-002-001, Corrective Action Program Instructions, Ver. 1.0
Enhanced Radworker Training Presentation Data

Records and Data

RWP 07-2204, Refueling Floor Decon, Laundry & Strippable Coatings, Rev. 0
RWP 07-2205, Refueling Floor Vessel Disassembly/Reassembly, Cavity/Dryer Separator Work & Support, Rev. 0
RWP 07-2206, Refueling Floor Inspections new fuel, sipping/scraping/ recon & storage; (360 platform activities) LLRT/ILRT, /IVVI/nozzle flushing & ISI, Rev. 0
RWP 07-2601, Drywell/steam chase HP and Ops Inspection, surveillance, sampling, valve line-ups includes HCU/TIP room (when down-posted) and torus, Rev. 0
RWP 07-2614, Subpile room work - TIP Indexer, Vib Reading, Tip Tube Work, RPIS, IRMS, SRMS, LPRMS, - Elect Disconnect and Reconnect, Repairs and Support, Rev. 0
RWP 07-2615, Drywell/Reactor Control Rod Drive Change-out, Transport and Support Activities, Rev. 0,
RWP 07-2620, Dry well/Steam Chase Remove-Shielding, Tents & Scaffolds & Support Activity, Rev. 0
2007 Unit 2 Outage Rolling Exposure Goal "vs" Actual Data, 02/12-16/07 & 02/26-03/01/07
Unit 2 RWP Total Cumulative Dose and Dose Budget Data: 02/12-16/07 and 02/26 - 03/01/07
CY 2006, Total Effective Dose Equivalent Data, Maximum Individual Exposure Data
Edwin I Hatch Nuclear Plant Collective Exposure Reduction Plan (2006-2010), September 30, 2006, Ver. 1
Unit 2 RWCUI Insoluble Activity During Shutdown, 02/28-03/02/03; 02/04-06/05; 02/05-11/07
Unit 2 Recirculation System BRAC Point Trending Data, 2R3 through 2R18
Unit 2 Recirculation System, BRAC Point Trends, 04/1991 through 02/2007
Reactor Water Soluble and Insoluble Cobalt-60 by Chemistry Regime, August 2006
Survey No. 18111, Unit 2 Condenser Bay 112 (2TB112), 05/03/05
Survey No. 18024, Unit 2 Condenser Bay 112 (2TB112), 05/24/05
Survey No. 30700, Unit 1 Reactor Building 158 foot elevation, 01/29/07
Survey No. 31794, Unit 2, Survey under reactor pressure vessel head and seal area, 02/16/07
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Plant ALARA Review Committee Meeting Minutes/Presentations for the following 2R19 activities: Instrument and Control Under Vessel Activities, 12/11/06; MSIV Outage Activities, 01/16/07; Drywell Scaffold Erection Presentation Data and Tier Two Scaffolding Presentation Data 01/17/07; Steam Relief Valve Work Details and Health Physics Drywell Coverage, 01/18/07; Contractor Under Vessel Activities, 02/02/07
ALARA Review Package Data for the following 2R19 tasks: RWP 07-2620, Drywell shielding, scaffolding and tent removal/replacement, 09/12/06; RWP 07-2614, TIP Indexer work, removal/replace tip tube, RPIs, IRMs, SRMs, LPRMs, electrical activities, vibration readings & supporting activities, 09/12/06; RWP 07-2615, CRD remove/replace, 09/12/06; RWP 07-2609, B21-F013 safety relief valve repairs, inspection, PM & supporting activities, 09/14/06; RWP 07-2205, disassemble/reassemble reactor vessel, cavity/dryer-separator work, and supporting activities, 09/11/06
ALARA Mid-Task Review Data for the following 2R19 tasks: RWP 07-2008, ISI, ILRT, I&C valve line-ups, functional test, and calibration, 02/13/07; RWP 07-2014, Torus proper diving, 02/25/07; RWP 07- 2202, Refuel bridge repairs, reactor cavity tool repair, stud bolt and fuel

prep machine activities, 02/13/07; RWP 07-2203, Fuel inspection activities, GERIS, ISI, IVVI, LLRT, ILRT, I&C, and nozzle flushing, (no date provided); RWP 07-2206, In-vessel work, uncouple CRDs, LPRMS, dryer inspection and supporting activities, very high radiation area activities, 02/24/07; RWP 07-2403, Stake condenser tubes, clean condenser/hotwell and supporting activities and turbine valves greater than 500, 000 DPM, 02/13/07; RWP 07-2602, Remove/replace equipment hatches, strongbacks, instrument cals, I&C, snubbers, LLRT, ILRT, and supporting activities, 02/21/07; RWP 07-2603, Shield door activities, insulation removal/replacement, temporary ventilation and supporting activities including subpile room, 02/25/07; RWP 07-2607, G31F001, G31F027 Repair, inspection, PM & supporting activities, 02/24/07; RWP 07-2611, B21-F022A-D and F028S A-D repair, inspection, PM, permanent platforms & supporting activities, 02/27/07; RWP 07-2613, B31-F023 & F031 A/B repair, inspection, PM and supporting activities, 12/19/07; RWP 07-2614, TIP Indexer work, removal, replace TIP tube RPIs, IRMS, SRMs, LPRMs, electrical activities, vibration readings & supporting activities, 02/17/07; RWP 07-2620, Shielding, scaffolding and tent removal and replacement, 02/17/07

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62RP-RAD-023-0S, Resin Packaging and Classification, Rev. 7.1

62RP-RAD-024-0S, DAW Waste Classification, Rev. 6 Ed. 2

62RP-RAD-040-0, Resin Dewatering/Drying System, Rev. 7.3

62RP-RAD-053-0, Cask Handling Procedure for CNS 8-120B Shipping Cask, Rev. 2.0

34SO-G11-023-2, Radwaste Phase Separator Operating Procedure, Ver. 12.10

64CH-SAM-025-0, Reactor Coolant Sampling and Analysis, Ver. 14.3

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